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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/583,099 | 03/26/2007 | Yoshikazu Akinaga | 292694US8PCT | 1271 |
| 22850 | 7590 | 04/30/2009 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | LIN, SHERMAN L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2447 | |
| | | | NOTIFICATION DATE | DELIVERY MODE |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/583,099 | Applicant(s) AKINAGA ET AL. | |
| | Examiner SHERMAN LIN | Art Unit 2447 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>18 September 2006, 11 September 2007 & 4 June 2008</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-6 are pending.

Claim Objections

2. Claims 1 and 5-6 are objected to because of the following informalities:
 - In claim 1 line 10, “information of the user terminal” should be “information of each user terminal”;
 - In claim 5 line 4, “network load prediction node” should be “network configuration management node”; and
 - In claim 6 line 9, “information of the user terminal” should be “information of each user terminal”.Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
4. Claims 4-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 4 lacks the necessary physical articles or objects to constitute a machine, manufacture, process, or a composition of matter within the meaning of 35 U.S.C. 101. As such, the claim fails to fall within a statutory category. It is, at best, functional descriptive material *per se*. Claim 5 is likewise rejected.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Wieczorek et al. (WO 00/07384).

With respect to claim 1, Wieczorek teaches a communication system in which a plurality of user terminals located in a plurality of service areas perform communications, the communication system comprising:

a mobility control node configured to manage a service area where each user terminal is located (i.e., system controller performs management functions in page 3 lines 23-32; and supporting coverage areas with subscriber units interfacing with infrastructure equipment in page 3 lines 6-13);

a session control node configured to manage a communication history of a communication performed by each user terminal (i.e., system controller comprises a function for resource allocation in page 3 lines 23-32; and resource allocation is supported by location history data, system usage information, and radio capability information page 3 line 31 – page 4 line 9); and

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a network load prediction node configured to acquire user information of the user terminal located in each service area and the communication history of each user terminal at predetermined timing (i.e., subscriber unit provides current location information, route information, and predicted future location information in page 4 lines 26-29; and in a period, series of transmissions from the subscriber unit are received page 6 lines 23-30), and to calculate a communication demand prediction in each service area based on the user information and the communication history (i.e., system assigns a hand-over site to a subscriber unit based on loading conditions; and allocating resources to a subscriber unit based on a combination of predicted future locations, signal strength, and operational capability information obtained from the subscriber unit in page 6 lines 1-16 and fig. 6).

With respect to claim 2, Wieczorek teaches the communication system further comprising:

a network configuration management node configured to control a logical path between an access apparatus and a service control node based on the communication demand prediction acquired from the network load prediction node (i.e., system assigns a hand-over site to a subscriber unit based on predicted loading conditions in page 6 lines 12-16 and fig. 1), the access apparatus being capable of communicating with a user

terminal in a predetermined service area and the service control node providing a predetermined service to the user terminal through the access apparatus (i.e., server sites **117** communicating to subscriber units in page 3 lines 14-17 and fig. 1; system allocating communication resources in anticipation of expected resource requirements of a subscriber unit in page 5 lines 18-24).

With respect to claim 3, Wieczorek teaches the communication system further comprising:

a user distribution database configured to manage user information of a user terminal in a communication state and user information of a user terminal in a non-communication state for each service area based on management information in the mobility control node (i.e., database **114** with coverage map data; additionally the database contains radio capability information and location history information reported by a subscriber unit in fig. 1, page 3 line 31 – page 4 line 9), and

wherein the network load prediction node is configured to acquire the user information of the user terminal located in each service area from the user distribution database at predetermined timing (i.e., maintaining a unit's location history by receiving a series of transmissions in a period of time; and system predicts future location information derived from tracking the unit based on the series of transmissions in a period of time in page 6

lines 22-30).

With respect to claim 4, Wieczorek teaches a network load prediction node for use in a communication system in which a plurality of user terminals located in a plurality of service areas perform communications, the network load prediction node comprising:

an acquirer configured to acquire user information of the user terminal located in each service area and a communication history of a communication performed by each user terminal at predetermined timing (i.e., subscriber unit provides current location information, route information, and predicted future information in page 4 lines 26-29; and maintaining a unit's location history by receiving a series of transmissions in a period of time in pg 6 lines 22-30); and

a calculator configured to calculate a communication demand prediction in each service area based on the user information and the communication history (i.e., system assigns a hand-over site to a subscriber unit based on predicted loading conditions; and allocating resources to a subscriber unit based on a combination of predicted future locations, signal strength, and operational capability information obtained from the subscriber unit in page 6 lines 1-16 and fig. 6).

With respect to claim 5, Wieczorek teaches a network configuration management node for use in a communication system in which a plurality of user terminals located in a plurality of service areas perform communications, the network load prediction node comprising:

a controller configured to control a logical path between an access apparatus and a service control node based on a communication demand prediction calculated based on user information of a user terminal located in each service area and a communication history of a communication performed by each user terminal (i.e., system assigns a hand-over site to a subscriber unit based on predicted loading conditions in page 6 lines 12-16 and fig. 1; and information of a subscriber further comprising history of location data and other user terminal information in page 4 lines 6-9), wherein the access apparatus being capable of communicating with a user terminal in a predetermined service area and the service control node providing a predetermined service to the user terminal through the access apparatus (i.e., server sites **117** communicating to subscriber units in page 3 lines 14-17 and fig. 1; system allocating communication resources in anticipation of expected resource requirements of a subscriber unit in page 5 lines 18-24).

With respect to claim 6, the limitations of claim 6 are similar to the limitations of claim 1. Therefore, claim 6 is rejected with the same reasoning as claim 1.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHERMAN LIN whose telephone number is (571)270-7446. The examiner can normally be reached on Monday through Friday 8:30AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joon Hwang can be reached on 571-272-4036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. L./
Examiner, Art Unit 2447
4/27/2009

/Joon H. Hwang/
Supervisory Patent Examiner, Art Unit 2447